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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/815,982	03/22/2001	Frank R. Miele	VWAVE.001CP2	7628
27299	7590	04/20/2005	EXAMINER	
GAZDZINSKI & ASSOCIATES 11440 WEST BERNARDO COURT, SUITE 375 SAN DIEGO, CA 92127			JUNG, WILLIAM C	
			ART UNIT	PAPER NUMBER
			3737	

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/815,982	<b>Applicant(s)</b> MIELE ET AL.	
	<b>Examiner</b> William Jung	<b>Art Unit</b> 3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-14, 19-24, 36, 38 and 41-58 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-14, 19-24, 36, 38 and 41-58 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>29012002, 14022005</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1- have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 7, 8, 19, 36, 38, 45, 46, 49, 51, 53, 56, and 58 are rejected under 35 U.S.C. 102(e) as being anticipated by *Voss et al* (US 6,228,034 B1).

Voss et al anticipate all claimed features in claims 1, 7, 8, 19, 36, 38, 45, 46, 49, 51, 53, 56, and 58.

***Claims 1, 8, 36, 45, 46, 49, 51, 53, 56, and 58:*** Voss et al disclose a method and apparatus of positioning a blood pressure sensor including locating a blood vessel disposed within a surrounding tissue with transmitting ultrasound energy into the tissue including the blood vessel, evaluating reflections of the ultrasound energy from the tissue and the blood vessel, identifying at least one region of ultrasound reflection within the tissue to distinguish blood vessel from the surrounding tissue, locating the local minimum by minimizing edge detection to detect the blood vessel, and positioning the blood pressure sensor based on the location

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emanating from the steps above (col. 2, line 48 – col. 3, line 11; col. 3, lines 36-57; col. 5, line 34 – col. 6, line 32).

**Claim 7:** In addition, Voss et al disclose of motor that provides desired compression on tissue surrounding the blood vessel ((col. 5, lines 42-49).

**Claim 19:** Furthermore, Voss et al disclose a lever arm 36 and pin 46, which control the translation and rotational movement of the housing 50 where the housing includes the blood pressure sensor and ultrasound transducer (col. 6, lines 38-49).

**Claim 38:** Voss et al disclose in figure 9 where the control of the ultrasound transducer and blood pressure sensor is coupled to central processor 160, i.e. CPU, computer etc.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 6, 10-14, 41-44, 47, 48, 50, 52, 54, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Voss et al.*

Voss et al substantially disclose all claimed features in claims 6, 10-14, 20-24, 41-44, 47, 48, 50, 52, 54, and 57

***Claims 6, 10-14, 41-44, 47, 48, 50, 52, 54, and 57:*** However, Voss et al do not explicitly state measuring depths, normalizing power function, analyzing the blood vessel as function of lumen position, envelop, modulation or applanation. However, Voss et al's evaluation of blood vessel location inherently achieves all of the above since the compression control and the

minimum and maximum pressure normalization to detect the vessel or artery walls is equivalent to above characteristics (col. 7, line 46 – col. 8, line 4).

**Claims 20-24:** Similarly, Voss et al disclose an analyzer to correct the motion artifact during the cardiac cycle by adjusting the power or amplitude level. The analyzer effectively corrects the Doppler shift in blood vessel location analysis , although Voss et al do not specifically states the Doppler shift correction.

6. Claims 2-5 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Voss et al* as applied to claim 1 above, and further in view of *Eckerle* (US 5,289,823).

Voss et al substantially disclose all claimed features in claims 2-5 and 55. However, Voss et al do not specifically disclose that the blood pressure sensor comprises a tonometric sensor. Eckerle teaches that the blood pressure can be monitored non-invasively via tonometric sensor. Therefore, it would have been obvious to one having an ordinary skill in the art at the time the invention was made to apply Eckerle's teaching of using tonometric sensor to monitor blood pressure to Voss et al's method and apparatus as an alternative to achieve the claimed invention.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

*Voss et al* (US 6,176,831 B1)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Jung, Ph.D. whose telephone number is 571-272-4739.


The examiner can normally be reached on Mon-Fri 8:30 AM to 5 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*BCS*  
April 15, 2005

  
**BRIAN L. CASLER**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3737**